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Abstract of the Invention

An improved cooling system provides cooling away from the surface of electrical and electronic components with very low parasitic power consumption and very high heat transfer rates. The component to be cooled is in thermal contact with a cold plate evaporator device. Refrigerant is circulated by a liquid refrigerant pump to the cold plate evaporator device, and the liquid refrigerant is at least partially evaporated by the heat generated by the component. The vapor is condensed by a conventional condenser coil and the condensed liquid along with any unevaporated liquid is returned to the pump. The system operates nearly isothermally in both evaporation and condensation.